

**SUPPORTING STATEMENT FOR**

**"Evaluation of User Satisfaction  
with NIH Internet Sites"**

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# **"Evaluation of User Satisfaction with NIH Internet Sites"**

## **Supporting Statement**

### **A. JUSTIFICATION**

#### **1. Circumstances Making the Collection of Information Necessary**

This is a request, made by the National Institutes of Health (NIH) Office of the Director (OD) Office of Communications & Public Liaison (OCPL) Online Information Branch (OLIB), that the Office of Management and Budget (OMB) approve, under the *Paperwork Reduction Act of 1995*, a three year generic clearance for the NIH to conduct user satisfaction research around its Internet sites. This effort is made according to Executive Order 12862 (Attachment A, pp1-2), which directs federal agencies that provide significant services directly to the public to survey customers to determine the kind and quality of services they want and their level of satisfaction with existing services.

The National Institutes of Health Internet sites are a vast collection of Web pages created and maintained by component organizations of the NIH, and are visited by 1.2 million people per month on average. All 25 of the NIH's Institutes and Centers (ICs) have established a Web presence with a home page and links to sub-pages that provide information to their respective audiences. (Attachment D, pp1-42). In addition, many NIH Offices (e.g., Office of Human Subjects Research, Office of Human Resource Management, Office of Research on Women's Health) have also put up Web sites that describe their activities (Attachment D, pp 43-47).

The audience for each site varies. The National Cancer Institute (NCI), for instance, maintains nearly 3

million web pages providing information geared toward patients on types of cancer, treatments, clinical trials, and cancer statistics. In addition, they provide information on funding opportunities and training programs for researchers. Information for policy-makers also exists on their site, in the form of strategic plans, budgets, and legislative affairs documents (Attachment D, p 2). The NCI Web site attracts cancer patients, family members of cancer patients, oncologists, researchers, librarians, physicians, nurses, and patient advocates (Attachment D, p 48).

In contrast, the Freedom of Information Office (FOIA) Web site consists of only three pages (Attachment D, p 56), and is of interest to individuals such as attorneys, advocates, and policy-makers, who want to make a FOIA request for detailed documentation. Yet their mission is the same as the NCI's in terms of disseminating information in a way that satisfies their customers.

When the majority of NIH Internet sites were created, the Webmasters designed the Web pages according to the organization of available material, taking stock of their existing information resources and simply creating electronic versions to be viewed across the Internet. When asked if actual audience feedback had been incorporated into the design, only nine out of 31 NIH Webmasters polled responded that their Web site was built using focus groups, results of customer inquiries, working groups, or other public feedback mechanisms (Attachment D, p 61). All 31 sites have been redesigned since then, and only one, The NCI's CancerNet Web site, was able to incorporate user feedback from an online survey (OMB No. 0925-0046). The survey instrument is shown in Attachment B, pp 1-2.

There is a clear need to measure user satisfaction with NIH Internet sites in order for the NIH to

comply with Executive Order 12862. In accordance with Executive Branch and Congressional mandates to provide information dissemination, and under its mission, NIH has rapidly expanded availability of vital health information. This project aims to evaluate user satisfaction with the content and usefulness of web-based delivery methods. Authorization to collect these data is given under Section 301 of the Public Health Service Act (42 USC 241) shown in Attachment A, p 3.

## **2. Purpose and Use of the Information Collection**

The purpose of the proposed research is to ensure that intended audiences find the information provided on the Internet sites easy to access, clear, informative, and useful. Specifically, the research will examine whether the information is presented in an appropriate technological format and whether it meets the needs of users of these Internet sites. The research will also provide a means by which to classify visitors to the NIH Internet sites, to better understand how to serve them.

The information generated from this research will enable NIH to evaluate the success of this new modality in response to fulfilling its legislative mandate to disseminate vital health information.

## **3. Use of Improved Information Technology and Burden Reduction**

As appropriate, automated information technology will be used to collect and process information in order to reduce the burden on the public. Survey instruments similar to the examples in Attachment B (pp 1, 2, and 3-3-2) will be conducted over the Internet.

#### **4. Efforts to Identify Duplication and Use of Similar Information**

As an effort to identify duplication, a poll of NIH Webmasters was conducted to discover if any of the ICs or Offices had conducted online surveys. Of the 31 Webmasters who responded, only one had been able to conduct an evaluative study with OMB clearance (OMB No. 0925-0046). This request applies to those NIH sites whose owners have not yet applied for clearance to conduct this research. To date, none of the other 30 NIH Webmasters polled have applied to OMB for clearance (Attachment D, p 61).

#### **5. Impact on Small Businesses or Other Small Entities**

The burden on small businesses or other small entities will be reduced both by the voluntary nature of the study and the short length of time required to respond to the survey instruments.

#### **6. Consequences of Collecting the Information Less Frequently**

This research will be conducted over the next three years and survey results will be administered, analyzed, and interpreted as needed on an on-going basis by individual ICs and Offices. Additional improvements and subsequent surveys can be offered on an as-needed basis to continue to refine the content and navigation of the NIH Internet sites.

The frequency with which users will complete the online surveys will depend on the number of different ICs and Offices they visit. Participation will be voluntary. The survey instrument will be presented to the user only if the user clicks on a link to the form itself.

## **7. Special Circumstances Relating to the Guidelines of 5CFR 1320.5**

There are no special circumstances that require the information to be collected in any of the formats identified, and request fully complies with regulation 5CFR 1320.5.

## **8. Comments in Response to the *Federal Register* Notice and Efforts to Consult Outside the Agency**

A. As required by 5CFR 1320.8(d), a notice of this proposed data collection appeared in the *Federal Register*, Vol. 65, No. 44, pg. 11787-11788 on March 6, 2000 (Attachment C).

There were no public comments.

B. Outside consultation was conducted with a firm contracted by the NIH to prepare an evaluation plan that includes survey instruments tailored to the NIH audience (Attachment D, p 62). The QRC Division of Macro International, Inc. (7315 Wisconsin Avenue, Suite 400W; Bethesda, MD 20812; 301-657-3070) delivered "*Evaluation Design/Planning and Methodology for the NIH Web Site-Phase I*" on March 31, 2000 under NIH Contract N01-OD-7-2114. QRC was instructed to develop survey instruments in accordance with industry-standard Web site evaluation techniques.

## **9. Explanation of Any Payment or Gift to Respondents**

There are no payments to respondents.

## **10. Assurance of Confidentiality Provided to Respondents**

The Privacy Act is not applicable. Demographic information will be used for analytical purposes only.

Names will not be recorded on the questionnaires, nor will personal identifying data be maintained in the database. While respondents may be given the option of providing their e-mail addresses for the purpose of receiving a response to a particular inquiry, these addresses will not be used for purposes of linking particular respondents to particular survey responses. The addresses will not be retained after the reply is sent to the respondent.

"Cookies" will not be employed as part of any online survey mechanism. A Cookie is a small file that a Web site transfers to a user's hard disk to allow the Web server to record specific information about the user's session while they are visiting the Web site. As the user will be voluntarily supplying requested information, there is no need to surreptitiously collect other details "behind the scenes." A copy of the NIH Web Privacy Notice that explains Cookie use on its Internet sites has been included in Attachment D, p 63.

## **11. Justification for Sensitive Questions**

No questions of a sensitive nature are included in the survey.

## **12. Estimates of Hour Burden Including Annualized Hourly Costs**

### **A. Estimated Annualized Burden Hours:**

It is estimated that participants will require no more than 5 minutes to complete each survey.

Actual time required will vary based on participant reading speed and level. The annual burden

table below shows total annual burden to participants.

Survey Area	Number of Respondents	Frequency of Response per Respondent	Avg. Burden Per Response (hrs.)	Burden Hours
<b>NIH Organization-wide</b>	<b>4000</b>			<b>334</b>
Overall user satisfaction	2000	1	0.1002	200
Specific indicators:				
Top-level and entry pages	1000	1	0.0668	67
Tools and initiatives	1000	1	0.0668	67
<b>Individual Institute/Office</b>	<b>100000</b>			<b>8350</b>
Overall user satisfaction	50000	1	0.1002	5010
Specific indicators:				
Top-level and entry pages	25000	1	0.0668	1670
Tools and initiatives	25000	1	0.0668	1670
<b>Total</b>	<b>104000</b>		<b>0.084</b>	<b>8684</b>

On average, the NIH Internet sites receive 1,264, 000 visitors per month. The sample size should provide adequate indication of the strengths and weaknesses of the NIH Internet sites.

#### **B. Estimated Annualized Burden Costs:**

An average hourly salary of approximately \$13.37 is assumed for all respondents, based on the Department of Labor (DOL) civilian labor force average wage guide. With a maximum annual respondent burden of 8,684 hours, the overall annual cost of respondents' time for the proposed interviews is estimated to be a maximum \$116,105 (8,684 hrs x \$13.37). There will be no direct costs to the respondents other than their time to participate in each study.

Total Respondent Hours	Hourly pay rate	Total Respondent Burden
8,684	\$13.37	\$116,105



### **13. Estimate of Other Total Annual Cost Burden to Respondent or Recordkeepers**

There will be no capital, operating, or maintenance costs to the respondent.

### **14. Annualized Cost to the Federal Government**

The approximate cost to the government for this study is \$17,500. This price includes costs for research design, pretesting, development of the Office of Management and Budget clearance package, data collection, data entry, data analyses, and development of a final report. It is estimated that two NIH staff members and two contract support staff will be required to devote, collectively, 700 hours for the duration of the proposed research. Assuming an annual salary of \$52,000, total government personnel costs will be \$17,500.

### **15. Changes in Hour Burden**

This is a new data collection.

### **16. Plans for Tabulation, Publication, and Project Time Schedule**

#### **A. Time Schedule**

Of the 31 NIH Webmasters polled, seven indicate a readiness to conduct an online survey.

Although the other 24 are not yet planning an online survey, all but four of them have attended some kind of usability training, and are aware of the value of Web survey data as it contributes to the design of Web sites for customer satisfaction. Several Webmasters indicated in response to the poll that they had not planned any surveys because they are awaiting the results of this OMB clearance request. During this past week (September 11, 2000), this office has fielded four inquiries on the status of the clearance process from Webmasters that were not included in

the initial poll. Awareness of the potential for receiving this generic clearance has spurred many Webmasters into action.

Some are more prepared than others. The National Center for Complementary & Alternative Medicine (NCCAM), for instance, has prepared a formal usability test plan for their online information retrieval tool, the CAM Citation Index (Attachment B, p 3). Those ICs and Offices that are not yet ready will gain valuable general perspective from the results of other organizations' surveys due to the NIH's efforts to share information among Webmasters. The World Wide Web Interest Group (WIG) is one such vehicle through which Webmasters meet to learn about usability concepts, Web technologies, and "lessons learned" by their NIH colleagues in the Web development process (Attachment D, p 64).

When this clearance is received, the Online Information Branch (OLIB) will assume responsibility for its operation and compliance, and will draw up a set of procedures for NIH ICs and Offices, to be presented 1) in person at the next WIG meeting; 2) online from a link on the OLIB Web page; and 3) via e-mail to NIH Webmasters and Information Officers. These procedures will explain:

1. how to formulate an online survey according to OMB guidelines;
2. how to present the online form to the user via appropriate Web links and language;
3. where to include the OMB clearance number and expiration date on the form;
4. how large the target audience should be and what should be done with the form when this

- target is reached;
5. when to survey the audience again for the purposes of measuring satisfaction with any changes made to the site; and
  6. the process by which the form must be submitted to OLIB for OMB approval.

The OLIB will submit the approval requests to OMB in a batch, once a week, only after reviewing them for potential conflict with OMB guidelines. Once the forms have been approved and returned, OLIB will notify the IC or Office and data collection may begin.

Data will be collected continuously until the goal of 4,000 respondents per survey is reached.

The form will then be removed from the Web site. Data will be analyzed, a report will be prepared, and improvements to the Web site will be made. The survey will be conducted again to verify that the modifications meet with user satisfaction. Results from the second survey will be compared to the first. If additional modifications to the Web site are required, the survey may be administered a third time.

#### **Project Time Line**

<b>Activity</b>	<b>Time Schedule</b>
OMB clearance received for survey form	Day 1
<b>Survey activated online</b>	No later than Day 4 (next business day)
Data collection	Fully automated/continuous
Data "dumped" for analysis	When 4,000 responses have been recorded
Data analysis/reporting	4 weeks from "dump"
Possible alterations to Internet site	8 weeks from analysis/reporting
<b>Survey re-activated online</b>	Upon launch of modified Web site
Data collection	Fully automated/continuous
Data "dumped" for analysis	When 4,000 responses have been recorded

Data analysis/reporting	2 weeks from "dump"
Possible alterations to Internet site	4 weeks from analysis/reporting
<b>Survey re-activated online</b>	Upon launch of modified Web site
Data collection	Fully automated/continuous
Data "dumped" for analysis	When 4,000 responses have been recorded
Data analysis/reporting	2 weeks from "dump"
Final report on all phases	4 weeks from final "dump"

## **B. Publication**

Study results will be used internally by the NIH to improve the usefulness of the Internet sites.

Development of reports, articles, and presentations may be developed as appropriate to share findings among NIH's ICs and Offices.

## **C. Analysis Plan**

The Online Information Branch procedures will guide NIH Webmasters to formulate surveys that give respondents the opportunity to make open-ended comments, although some survey items (i.e., demographic questions) will provide quantitative data.

Given the specified objectives, analysis will consist of descriptive statistics, which will allow NIH to understand the perceived strengths and weaknesses of the site. The open-ended comments, whether related to format or content, will be coded and categorized for value in possible improvements. A sample results summary of coded data is included in Attachment D, p 48.

When 50% or more of the 4,000 respondents answer that they do not like a section, or when respondents reveal an error in software design or content, it is a clear indication that the item should be altered. Demographic data will be considered for use in redesigning holistically, not to

weight replies to any particular question. Each individual IC or Office will bear the responsibility of interpreting these results and making changes they perceive appropriate.

The survey will be administered after any modifications have been made to validate the redesign.

Results from all surveys will be compared to measure Web site performance at the end of the effort.

#### **17. Reason(s) Display of OMB Expiration Date is Inappropriate**

No exemption is requested.

#### **18. Exceptions to Certification for Paperwork Reduction Act Submissions**

This data collection has been designed in accordance with the requirements specified in Item 19 of the OMB 83-I. No exceptions to certification are requested.

### **B. STATISTICAL METHODS**

There are no formal statistical methods employed in this study. The emphasis of the study is on general audience responses to the proposed materials. The limited nature of the data will support only descriptive statistics. As such, statistical power is not germane to this project.

Visitors to the NIH Internet sites will find opportunities to complete online surveys at various points of their browsing through the IC and Office Web sites. The target sample size of 4,000 respondents per survey should be sufficient to achieve an adequate spread of gender, age, race, and ethnicity to assure a

broad array of user input.

The protocol described herein has been developed to provide maximum response rate among potential participants. The survey forms submitted to the OLIB for OMB clearance will be reviewed by NIH staff for readability, comprehensibility, and time to complete. The survey procedures that will be promoted by the OLIB are those that have been researched and recommended by the contractor, QRC (Attachment D, p 62), and are standard to numerous Internet user satisfaction studies. The short length of time required for each survey is expected to act as an incentive for completion, and the ICs and Offices will be encouraged to present the survey to site visitors as a way of valuing their input to the site's improvement. Many visitors to the NIH Internet sites have a personal investment in the success of their ability to retrieve credible health information. It is reasonable to expect that respondents will be motivated to provide "customer feedback" to a site that offers information that they value.